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			GWARTNEY, ELIZABETH A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Application No. Applicant(s) 10/550,113 KARGEL ET AL. Office Action Summary Examiner Art Unit Elizabeth Gwartney 1794 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS. WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). Status 1) Responsive to communication(s) filed on 08 December 2008. 2a) This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1.2.4-14 and 16-30 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) _____ is/are allowed. 6) Claim(s) 1-2, 4-14, 16-30 is/are rejected. 7) Claim(s) _____ is/are objected to. 8) Claim(s) _____ are subject to restriction and/or election requirement. Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are; a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abevance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. Attachment(s)

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DETAILED ACTION

 The Amendment filed 12/08/2008 has been entered. Claims 3 and 15 have been cancelled and claim 30 has been added. Claims 1-2, 4-14, and 16-30 are pending.

2. The previous, $112\ 2^{md}$ Paragraph rejections of claims 20-21 and 29 have been withdrawn in light of applicant's amendments made 12/08/2008.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 29, there is no disclosure in the specification of "cutting the avocado into two to four pieces." While the specification discloses cutting the avocado into halves (i.e. two pieces - p.7/L12, p.8/L13), the specification does not provide support for cutting the avocado into four pieces.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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 Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 13, the term "substantially" renders the claims indefinite because is it not clear what is meant by substantially or how denatured or inactivated the enzyme has to be in order to be considered "substantially".

Claim Rejections - 35 USC § 103

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
 obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 - 1. Determining the scope and contents of the prior art.
 - Ascertaining the differences between the prior art and the claims at issue.
 - 3. Resolving the level of ordinary skill in the pertinent art.
 - Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-17 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over
 Takahashi (US 6,358,555) in view of Rogers et al. (US 4,701,330).

Regarding claims 1-5, 7-8 and 12, Takahashi discloses a method of processing avocado meat comprising of heating avocado pieces in water that is at a temperature around 100°C (i.e. around boiling) and contains baking powder for 4-5 minutes (C4/Example 1/L27-43, C5/Example 2/L7-8).

Since the heating temperature, around 100°C, disclosed by Takahashi, is identical to that presently claimed, it is clear that it would intrinsically be sufficient to substantially denature native degradative enzymes.

Given that Takahashi disclose avocado identical that that presently claimed, it is clear that the avocado would intrinsically contain the native enzymes recited.

While Takahashi discloses that the heating water contains baking powder, the reference does not explicitly disclose that the water environment is alkaline with a pH greater than 9.

Rogers et al. teach a method for preserving the green color of vegetables comprising immersing blanched vegetables in an alkaline solution having a pH of 7.2 to 9.5 for a time ranging from 5 to 30 minutes (C1/L7-12, C2/L55-57). Rogers et al. teach that chlorophyll is responsible for the green color in vegetables (C1/L16-17). Rogers et al. also teach that is it is known that an acid environment causes the breakdown of chlorophyll, hence, the loss of green

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color while treating green vegetables with an alkaline solution will preserve green color (C1/L18-20, C2/L62-64).

Takahashi and Rogers et al. are combinable because they are concerned with the same field of endeavor, namely, the preservation of fresh produce. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an alkaline environment (i.e. pH 7.2-9.5), as taught by Rogers et al., in the boiling water of Takahashi for the purpose of preserving the green color of the avocado (i.e. preventing the acidic breakdown of chlorophyll).

Regarding claim 6, modified Takahashi discloses all of the claim limitations as set forth above. While Takahashi discloses that the peel is removed from the avocado (C3/L61-62), the reference fails to disclose that the avocado skin is removed prior to heating the pieces in water. However, the selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results (*In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946)).

Regarding claim 9, modified Takahashi disclose all of the claim limitations as set forth above and that heating comprises steaming the avocado (C2/L15-16, Figure 3/Step 4).

Regarding claims 10-11, modified Takahashi discloses all of the claim limitations as set forth above and that the avocado meat is cut in half, pitted, optionally cut into 3 or more pieces and skinned (C3/L28-34, C3/L61-62).

Regarding claims 13-16, Takahashi discloses a method of treating avocado meat comprising the steps of pitting and heating the avocado in water that is at a temperature around

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100°C (i.e. around boiling) and contains baking powder for 4-5 minutes (Figure 1/Step 2, C4/Example 1/L27-43, C5/Example 2/L7-8).

Since the heating temperature, around 100° C, disclosed by Takahashi, is identical to that presently claimed, it is clear that it would intrinsically be sufficient to substantially inactivate enzymes.

While Takahashi discloses that the heating water contains baking powder, the reference does not explicitly disclose that the water environment is alkaline with a pH greater than 9.

Rogers et al. teach a method for preserving the green color of vegetables comprising of immersing blanched vegetables in an alkaline solution having a pH of 7.2 to 9.5 for a time ranging from 5 to 30 minutes (C1/L7-12, C2/L55-57). Rogers et al. teach that chlorophyll is responsible for the green color in vegetables (C1/L16-17). Rogers et al. also teach that is it is known that an acid environment causes the breakdown of chlorophyll, hence, the loss of green color while treating green vegetables with an alkaline solution will preserve green color (C1/L18-20, C2/L62-64).

Takahashi and Rogers et al. are combinable because they are concerned with the same field of endeavor, namely, the preservation of fresh produce. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an alkaline environment (i.e. pH 7.2-9.5), as taught by Rogers et al., in the boiling water of Takahashi for the purpose of preserving the green color of the avocado (i.e. preventing the acidic breakdown of chlorophyll).

Regarding claim 17, modified Takahashi disclose all of the claim limitations as set forth above and that the heating step comprises steaming (C2/L15-16, Figure 3/Step 4).

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Regarding claim 29, Takahashi discloses a method of processing avocado comprising the steps of pitting the avocados by cutting the avocados in half and heating avocado pieces in water that is at a temperature around 100°C (i.e. around boiling) and contains baking powder for 4-5 minutes (Figure 1/Step 2, C4/Example 1/L27-43, C5/Example 2/L7-8).

While Takahashi discloses that the heating water contains baking powder, the reference does not explicitly disclose that the water environment is alkaline with a pH greater than 8.

Rogers et al. teach a method for preserving the green color of vegetables comprising of immersing blanched vegetables in an alkaline solution having a pH of 7.2 to 9.5 for a time ranging from 5 to 30 minutes (C1/L7-12, C2/L55-57). Rogers et al. teach that chlorophyll is responsible for the green color in vegetables (C1/L16-17). Rogers et al. also teach that is it is known that an acid environment causes the breakdown of chlorophyll, hence, the loss of green color while treating green vegetables with an alkaline solution will preserve green color (C1/L18-20, C2/L62-64).

Takahashi and Rogers et al. are combinable because they are concerned with the same field of endeavor, namely, the preservation of fresh produce. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an alkaline environment (i.e. pH 7.2-9.5), as taught by Rogers et al., in the boiling water of Takahashi for the purpose of preserving the green color of the avocado (i.e. preventing the acidic breakdown of chlorophyll).

Given that modified Takahashi discloses heating the avocados as presently claimed, it is clear that the avocados would intrinsically display less bitter taste.

Regarding claim 30, modified Takahashi discloses all of the claim limitations as set forth above. Given that Takahashi discloses avocados as presently claimed, it is clear that the avocados would inherently have a high fat content and green color due to chlorophyll. Further, given that modified Takahashi discloses a method that comprises heating avocados in an alkaline solution identical to that presently claimed, it is clear that enzymatic degradation of fat would intrinsically be inhibited and the green color due to chlorophyll would intrinsically be stabilized.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US 6.358.555) in view of Rogers et al. (US 4.701.330) as applied to claim 13 above, and further in view of Andonian et al. (US 4,374,153).

Regarding claim 18, modified Takahashi discloses all of the claim limitations as set forth above but fails to disclose that the alkaline environment is accomplished by adding a chemical comprising sodium tetrapyrophosphate.

Andonian et al. teach treating onions with an effective amount of base to inhibit discoloration or "pinking" that occurs when onions are cut (Abstract, C1/L8-13). Andonian et al. teach that the surface of the onions must be at a pH of 7-8 or greater to effectively suppress pigment formation (C4/L54-57). Andonian et al. also teach that sodium tetrapyrophosphate is used to adjust the pH of the cut onions (C4/L22-40).

Modified Takahashi and Andonian et al. are combinable because they are concerned with the same field of endeavor, namely, the preservation of fresh produce. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used sodium tetrapyrophosphate, as taught by Andonian et al., to accomplish an alkaline environment

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for the heating water of modified Takahashi, because doing so would amount to nothing more than a use of a known base for its intended use in a known environment to accomplish entirely expected results as well as inhibit discoloration.

Claims 19-23 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over
 Brito (US 5,871,794) in view of Takahashi (US 6,358,555) and Rogers et al. (US 4,701,330).

Regarding claims 19 and 25-26, Brito discloses a method of manufacturing guacamole comprising the steps of preparing avocado by pitting and peeling (C3/L33-34), macerating the avocado (i.e. cutting into small pieces and mixing - C3/L35-41) and adding flavoring ingredients and tomatillo (i.e. oxidation inhibitor) to the mixed avocado (C2/L67-68, C3/L58-59, C3/L2-4).

While Brito discloses preparation of mixed avocado, the reference does not explicitly disclose heating under alkaline conditions of greater than pH 8.

Takahashi teaches a method of processing avocado meat comprising of heating avocado pieces in water or steam for 4-5 minutes (Figure 1/Step3, Figure 3/Step 4). Takahashi teaches that the heat treated avocados maintain their original good taste and do not discolor (C1/65-C2/L3).

Rogers et al. teach a method for preserving the green color of vegetables comprising of immersing blanched vegetables in an alkaline solution having a pH of 7.2 to 9.5 for a time ranging from 5 to 30 minutes (C1/L7-12, C2/L55-57). Rogers et al. teach that chlorophyll is responsible for the green color in vegetables (C1/L16-17). Rogers et al. also teach that is it is known that an acid environment causes the breakdown of chlorophyll, hence, the loss of green

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color while treating green vegetables with an alkaline solution will preserve green color (C1/L18-20, C2/L62-64).

Brito, Takahashi and Rogers are combinable because they are concerned with the same field of endeavor, namely preservation of produce based foods. It would have been obvious to one of ordinary skill in the art to have heated the avocado pieces, as taught by Takahashi, under alkaline conditions of greater than pH 8, as taught by Rogers, for the purpose of maintaining good avocado flavor and preserving the green color of the avocado.

Regarding claims 20-21, modified Brito disclose all of the claim limitations as set forth above. Further, Brito discloses placing the avocado mixture into storage containers, sterilizing packaged avocado mixture and sealing the containers (C4/L28-37).

Regarding claims 22 and 28, modified Brito discloses all of the claim limitations as set forth above and disclose a guacamole product (Abstract).

Regarding claim 23, modified Brito discloses all of the claim limitations as set forth above. While Brito disclose adding flavoring ingredients the reference does not explicitly disclose that the flavoring agents are added before the macerating step. However, the selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results (*In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946)).

Regarding claim 27, modified Brito discloses all of the claim limitations as set forth above. Brito also discloses that the flavoring ingredients comprise onion (C3/L60). Brito also discloses that the choice of flavoring ingredients and respective amounts is determined largely by individual taste. Given that garlic is a known ingredient in guacamole, it would have been

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obvious to one of ordinary skill in the art to have included garlic as a flavoring ingredient in the avocado mixture of modified Brito.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brito
 (US 5,871,794) in view of Takahashi (US 6,358,555) and Rogers et al. (US 4,701,330) as applied to claim 19 above, and further in view of LaBell ("Glycerine prolongs shelf life").

Regarding claim 24, modified Brito discloses all of the claim limitations as set forth above. Brito is silent with regards to adding glycerol.

LaBell teaches the use of glycerine (i.e. glycerol) in food products (p.1/all paragraphs).

LaBell teaches that glycerine is larger than water molecules and excludes water - glycerine helps reduce water activity and prolong shelf life (p.1/P3-4).

Modified Brito and LaBell are combinable because they are concerned with the same field of endeavor, namely, food preservation. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included glycerol, as taught by LaBell, in the packaged avocado mixture of modified Brito for the purpose of reducing water activity and prolonging the shelf life of product.

Response to Arguments

 Applicant's arguments filed 12/08/2008 have been fully considered but they are not persuasive.

Applicants argue that one of ordinary skill in the art would understand the meaning of "substantially" denaturing or inactivating enzymes. Applicants explain that as a result of

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substantially denaturing the enzymes, the reaction which causes the degradation of fat and which lead to browning and rancidity of the avocado are inhibited.

It is the Examiner's position that the term "substantially" is indefinite, given that substantially denatured would mean that the enzymes could be partially or completely inactivated.

Applicant submits that baking powder is neutral and is not alkaline. Applicant explains that Takahashi teaches heating avocado either in water alone or in a water solution containing baking powder, vinegar and salt or Japanese sake and sugar. Applicants argue that none of these solutions are utilized in the present invention nor are they alkaline.

Examiner finds that baking powder is alkaline. However, regardless, Examiner does not suggest that the water environment disclosed by Takahashi is alkaline with a pH greater than 9. Instead, Examiner uses Rogers et al. to teach the use of an alkaline solution having a pH of 7.2 to 9.5 for preserving the green color, associated with chlorophyll, of vegetables and in combination with Takahashi, discloses the present invention.

Applicants argue that there is no teaching in Takahashi suggesting the elimination of the freezing step required by the method of Takahashi or that a desirable avocado product could be obtained where the step eliminated.

Examiner does not suggest that the freezing step of Takahashi should be or could be eliminated. The transitional term "comprising" used in method claims 1, 13, 19 and 29 is inclusive and does not exclude additional, unrecited method steps such as freezing.

Applicants argues that while Rogers et al. is concerned with the preservation of chlorophyll in blanched vegetables, the reference provides no teaching about the processing of

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avocados which are fruits and have unique properties. Applicants explain that avocados contain high levels of fat. Further, applicants argue that Rogers et al. contains no teaching or recognition relating to inhibiting enzymatic degradation of fat. Applicants finds that because of the unique nature of avocados, one would not apply the Rogers reference which is limited to typical green vegetables.

Applicants' are reminded that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it maybe in a different field of endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." Rogers et al. is, therefore, a reasonably pertinent reference, because it teaches the preservation of chlorophyll, which is a function especially pertinent to the invention at hand. Given avocados contain chlorophyll, since chlorophyll is responsible for the green color of avocados, a skilled artisan would look to a reference, such as Rogers et al., for teachings with regards to color preservation.

Examiner does not suggest that Rogers et al. teach or suggest the inhibition of enzymatic fat degradation. Note, that while Rogers et al. does not disclose <u>all</u> the features of the present claimed invention, Rogers et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely using an alkaline

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solution for chlorophyll preservation and in combination with the primary reference, discloses the presently claimed invention.

Applicants argues that given that it known that the enzymes responsible for browning in avocados are slowed in highly acidic conditions, since this knowledge would teach away from using an alkaline environment of Rogers, it would not have been obvious to apply the teachings of Rogers to avocados.

While acidic conditions inhibit enzymes responsible for browning, heat, as applied in Takahashi and required by the present claims, also inhibits enzymes. Further, Rogers et al. is not used to teach the slowing of enzymes responsible for browning but rather the use of an alkaline solution to slow chlorophyll degradation. Given a method comprising heating avocados, as disclosed by Takahasi, in an alkaline solution, as taught by Rogers et al., it is clear that native degradative enzymes would be denatured and green color (i.e. chlorophyll) would be maintained.

Applicants argue that because Takahashi teaches heating avocados in a neutral or acidic environment, one would not consider heating the avocados in an alkaline environment.

As discussed previously, one would be motivated to heat the avocados in an alkaline environment, as taught by Rogers et al., to preserve the green color (i.e. chlorophyll) of the avocados

Applicants argue that Andonian does not disclose avocado processing.

However, note that while Andonian does not disclose <u>all</u> the features of the present claimed invention, Andonian is used as a teaching reference, and therefore, it is not necessary for these secondary reference to contain all the features of the presently claimed invention, *In re Nieveli*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ

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871, 881 (CCPA 1981). Rather Andronian teaches a certain concept, namely the use of sodium tetrapyrophosphate for inhibiting discoloration and in combination with the primary reference, disclose the presently claimed invention.

Applicants argue that Brito does not teach heating avocado alone or under alkaline conditions of greater than pH 8.

Examiner does not suggest that Brito discloses heating avocado alone or under alkaline condition of greater than 8, rather Brito discloses a method of manufacturing guacamole.

Takahashi is used to teach heating avocado and Rogers is used to teach processing under alkaline conditions, and in combination with Brito teach the presently claimed invention.

Conclusion

 THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Gwartney whose telephone number is (571) 270-3874. The examiner can normally be reached on Monday - Thursday;7:30AM - 5:00PM EST, working alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. G./

Examiner, Art Unit 1794

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794